

SANYO Semiconductors DATA SHEET

MCH6629 — General-Purpose Switching Device Applications

Features

- · Low ON-resistance.
- · Ultrahigh-speed switching.
- 1.5V drive.
- High ESD voltage (TYP 300V)
 [Built-in one side diode for protection between Gate-to-Source].
- · Composite type with 2 MOSFETs contained in a single package, facilitating high-density mounting.

Specifications

Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	VDSS		-30	V
Gate-to-Source Voltage (*1)	VGSS		-10	V
Drain Current (DC)	ΙD		-0.4	Α
Drain Current (Pulse)	IDP	PW≤10μs, duty cycle≤1%	-1.6	Α
Allowable Power Dissipation	PD	Mounted on a ceramic board (900mm ² ×0.8mm) 1unit	0.8	W
Channel Temperature	Tch		150	°C
Storage Temperature	Tstg		-55 to +150	°C

^{(*1):} Note, when designing a circuit using this product, that it has a gate (oxide film) protection diode connected only between its gate and source.

Electrical Characteristics at Ta=25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	Offic
Drain-to-Source Breakdown Voltage	V(BR)DSS	ID=-1mA, VGS=0V	-30			V
Zero-Gate Voltage Drain Current	IDSS	V _{DS} =-30V, V _{GS} =0V			-1	μΑ
Gate-to-Source Leakage Current	IGSS	VGS=-8V, VDS=0V			-1	μΑ
Cutoff Voltage	VGS(off)	V _{DS} =-10V, I _D =-100μA	-0.4		-1.4	V
Forward Transfer Admittance	yfs	V _{DS} =-10V, I _D =-0.2A	0.25	0.42		S
Static Drain-to-Source On-State Resistance	R _{DS} (on)1	I _D =-0.2A, V _G S=-4V		1.5	1.9	Ω
	RDS(on)2	ID=-0.1A, VGS=-2.5V		2.0	2.8	Ω
	RDS(on)3	ID=-10mA, VGS=-1.5V		4.0	8.0	Ω
Input Capacitance	Ciss	V _{DS} =-10V, f=1MHz		40		pF
Output Capacitance	Coss	VDS=-10V, f=1MHz		8		pF
Reverse Transfer Capacitance	Crss	V _{DS} =-10V, f=1MHz		4.5		pF

Marking: YL

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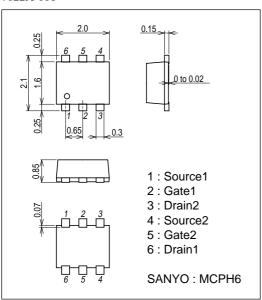
MCH6629

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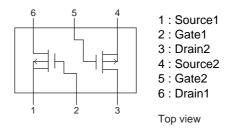
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	Oill
Turn-ON Delay Time	td(on)	See specified Test Circuit.		10		ns
Rise Time	t _r	See specified Test Circuit.		5		ns
Turn-OFF Delay Time	t _d (off)	See specified Test Circuit.		10		ns
Fall Time	tf	See specified Test Circuit.		5		ns
Total Gate Charge	Qg	V _{DS} =-10V, V _{GS} =-4V, I _D =-0.4A		0.83		nC
Gate-to-Source Charge	Qgs	V _{DS} =-10V, V _{GS} =-4V, I _D =-0.4A		0.25		nC
Gate-to-Drain "Miller" Charge	Qgd	V _{DS} =-10V, V _{GS} =-4V, I _D =-0.4A		0.17		nC
Diode Forward Voltage	V _{SD}	I _S =-0.4A, V _{GS} =0V		-1.0	-1.5	V

Package Dimensions

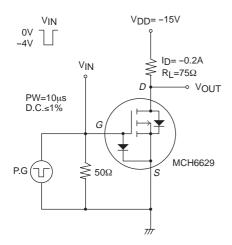
unit : mm (typ) 7022A-006

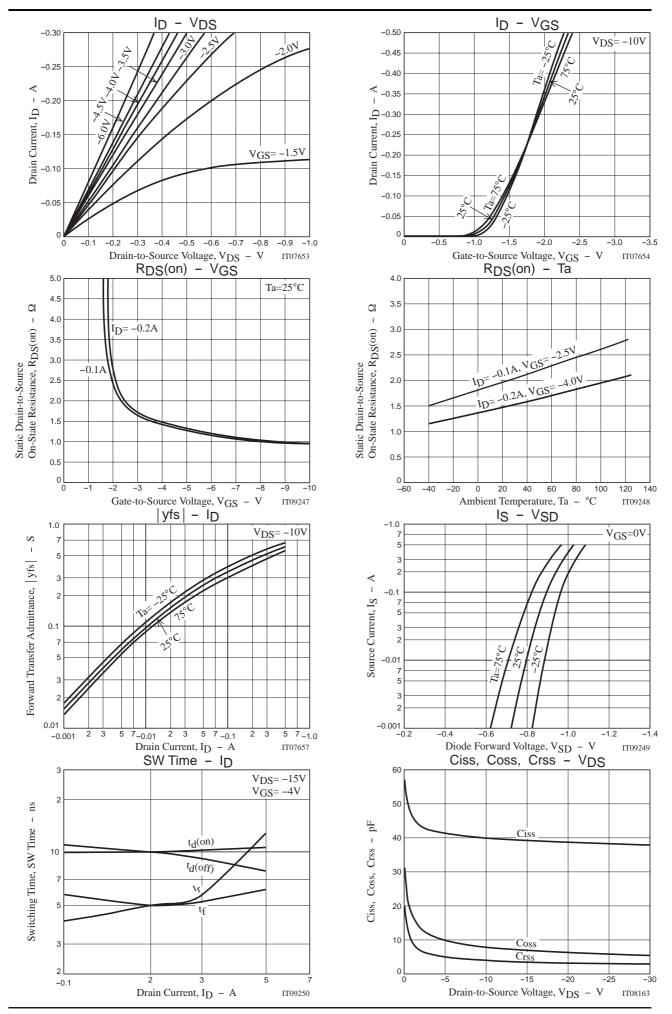


Electrical Connection

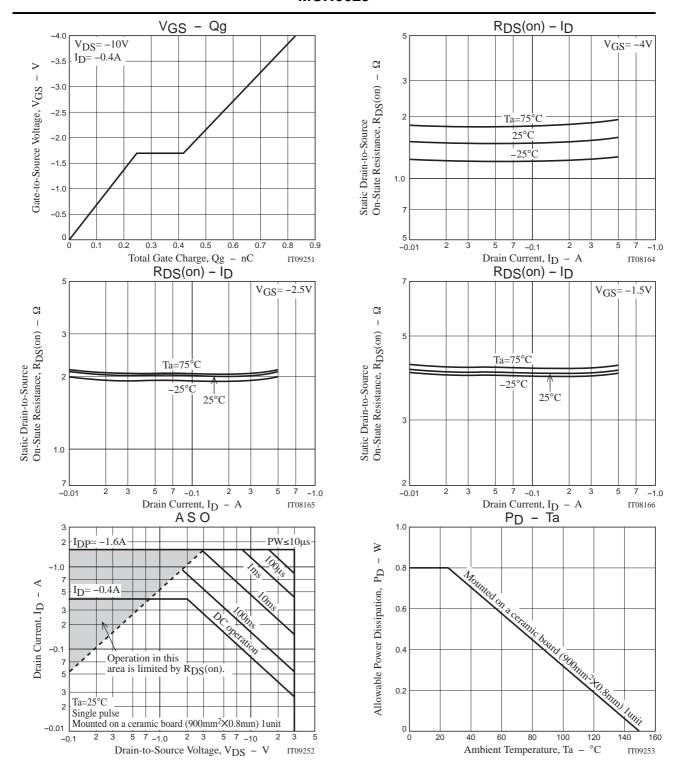


Switching Time Test Circuit





MCH6629



Note on usage : Since the MCH6629 is a MOSFET product, please avoid using this device in the vicinity of highly charged objects.

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